CLAIM AMENDMENTS:

Pending Claims

Claims 1-3 (Canceled).

Claim 4 (Currently Amended): A vertical takeoff and landing aircraft as in claim [[3]] 42 wherein said first and second ~~plurality of~~ detectors are coupled to said aircraft fuselage and are directed towards said first and second ~~plurality of~~ rotors respectively.

Claim 5 (Currently Amended): A vertical takeoff and landing aircraft as in claim [[3]] 42 wherein said first and second ~~plurality of~~ detectors are coupled to said first and second ~~plurality of~~ rotors respectively and are directed towards said aircraft fuselage.

Claim 6 (Currently Amended): A vertical takeoff and landing aircraft as in claim [[3]] 42 wherein said first and second ~~plurality of~~ detectors detect infrared energy of said first and second ~~plurality of~~ rotors respectively.

Claim 7 (Currently Amended): A vertical takeoff and landing aircraft as in claim [[3]] 42 wherein said first and second ~~plurality of~~ detectors detect ultraviolet energy of said first and second ~~plurality of~~ rotors respectively.

Claim 8 (Currently Amended): A vertical takeoff and landing aircraft as in claim [[3]] 42 wherein said first and second ~~plurality of~~ detectors detect infrared energy of at least a portion of said aircraft fuselage.

Claim 9 (Currently Amended): A vertical takeoff and landing aircraft as in claim [[3]] 42 wherein said first and

second ~~plurality of~~ detectors detect ultraviolet energy of at least a portion of said aircraft fuselage.

Claim 10 (Currently Amended): A vertical takeoff and landing aircraft as in claim [[3]] 42 further comprising first and second ~~a plurality of~~ emitters, said first and second ~~plurality of~~ detectors generating said rotor signals in response to emitted energy from said first and second ~~plurality of~~ emitters respectively.

Claim 11 (Currently Amended): A vertical takeoff and landing aircraft as in claim 10 wherein said first emitter is an ~~plurality of emitters are selected from at least two of~~ infrared ~~emitters and~~ emitter or an ultraviolet emitter ~~emitters~~.

Claim 12 (Currently Amended): A vertical takeoff and landing aircraft as in claim 10 wherein ~~said plurality of detectors comprises~~:

[[a]] said first detector generates ~~generating~~ a first rotational position signal indicative of a first position of [[a]] said first rotor in response to emitted energy from [[a]] said first emitter ~~of said plurality of emitters~~; and

[[a]] said second detector generates ~~generating~~ a second rotational position signal indicative of a second position of [[a]] said second rotor in response to emitted energy from [[a]] said second emitter ~~of said plurality of emitters; said controller coupled to said first detector and said second detector and adjusting rotational speed of said plurality of rotors in response to said first rotational position signal and said second rotational position signal~~.

Claim 13 (Canceled).

Claim 14 (Withdrawn): A vertical takeoff and landing aircraft as in claim 3 further comprising a plurality of emitters, said plurality of detectors generating said rotor signals in response to reflected energy generated from said plurality of emitters.

Claim 15 (Withdrawn): A vertical takeoff and landing aircraft as in claim 14 further comprising at least one reflective device reflecting energy emitted from said plurality of emitters towards said plurality of detectors.

Claim 16 (Withdrawn): A vertical takeoff and landing aircraft as in claim 14 wherein said plurality of emitters and said plurality of detectors are coupled to said aircraft fuselage.

Claim 17 (Withdrawn): A vertical takeoff and landing aircraft as in claim 14 wherein said plurality of emitters and said plurality of detectors are coupled to said plurality of rotors.

Claim 18 (Currently Amended): A vertical takeoff and landing aircraft as in claim [[3]] 42 wherein said controller adjusts the rotational speed of said first rotor by adjusting ~~in adjusting rotational speed of said plurality of rotors adjusts~~ gas flow to said first rotor ~~plurality of rotors~~.

Claim 19 (Currently Amended): A vertical takeoff and landing aircraft as in claim [[3]] 42 further comprising at least one gas control valve, said controller adjusting the rotational speed of said ~~plurality of rotors~~ via control of said at least one gas control valve.

Claim 20 (Currently Amended): A vertical takeoff and landing aircraft as in claim [[3]] 42 further comprising at least one brake, said controller adjusting the rotational speed of said ~~plurality of rotors~~ via control of said at least one brake.

Claim 21 (Currently Amended): A vertical takeoff and landing aircraft as in claim [[3]] 42 further comprising at least one drag device, said controller adjusting the rotational speed of said ~~plurality of rotors~~ via control of said at least one drag device.

Claim 22 (Currently Amended): A vertical takeoff and landing aircraft as in claim 21 wherein said at least one drag device is selected from a group consisting ~~at least one~~ of a flap, a slat, a flaperon, an aileron, a spoiler, a drag plate, and a split aileron.

Claim 23 (Currently Amended): A vertical takeoff and landing aircraft as in claim [[3]] 42 wherein said controller switches said first and second rotors ~~plurality of tandem rotor/wings~~ between a vertical lift mode and a fixed wing mode.

Claim 24 (Canceled).

Claim 25 (Currently Amended): A vertical takeoff and landing aircraft as in claim [[3]] 42 wherein said first and second ~~plurality of~~ rotors are tandem rotor/wings.

Claims 26-40 (Canceled).

Claim 41 (New): A rotor rotational position-adjusting system for a vertical takeoff and landing aircraft comprising:

a first detector that generates rotor signals when a blade of a first rotor of the aircraft passes through a first rotational position;

a second detector that generates rotor signals when a blade of a second rotor of the aircraft passes through a second rotational position; and

a controller coupled to said first and second detectors to receive said rotor signals, wherein said controller determines the relative rotational position of said first and second rotors as a function of said rotor signals, compares said relative rotational position of said first and second rotors with a specified angular tolerance, and adjusts a rotational speed of said first rotor when said relative rotational position of said first and second rotors is outside said specified angular tolerance.

Claim 42 (New): A vertical takeoff and landing aircraft comprising:

an aircraft fuselage;

first and second hubs mechanically coupled to said fuselage;

first and second drive systems for respectively driving said first and second hubs to rotate;

first and second rotors mechanically coupled to said first and second hubs respectively;

a first detector that generates rotor signals when a blade of said first rotor passes through a first rotational position;

a second detector that generates rotor signals when a blade of said second rotor passes through a second rotational position; and

a controller coupled to said first and second detectors to receive said rotor signals, wherein said controller determines the relative rotational position of said first and second rotors as a function of said rotor signals, compares said relative rotational position of said first and second rotors with a specified angular tolerance, and adjusts a rotational speed of said first rotor when said relative rotational position of said first and second rotors is outside said specified angular tolerance.

Claim 43 (New): A vertical takeoff and landing aircraft comprising:

an aircraft fuselage;

first and second hubs mechanically coupled to said fuselage;

first and second drive systems for respectively driving said first and second hubs to rotate;

first and second rotors mechanically coupled to said first and second hubs respectively;

first and second emitters mounted to said fuselage or mounted to a blade of said first rotor and a blade of said second rotor respectively;

a first detector that generates rotor signals in response to emissive energy from said first emitter when said blade of said first rotor passes through a first rotational position;

a second detector that generates rotor signals in response to emissive energy from said second emitter when said blade of said second rotor passes through a second rotational position; and

a controller coupled to said first and second detectors to receive said rotor signals, wherein said controller determines the relative rotational position of said first and second rotors as a function of said rotor signals, compares said relative rotational position of said first and second rotors with a specified angular tolerance, and adjusts a rotational speed of said first rotor when said relative rotational position of said first and second rotors is outside said specified angular tolerance and does not adjust a rotational speed of said first rotor when said relative rotational position of said first and second rotors is within said specified angular tolerance.